

**AMENDMENTS TO THE CLAIMS**

---

1. (currently amended) A digital communication receiver adapted to communicate with a digital communication transmitter across a communication channel, the digital communication receiver comprising:

a first channel estimator adapted to provide a channel estimate of the communication channel based on a received signal;

an equalizer adapted to estimate a sequence of transmitted symbols and provide a sequence of decided symbols based on the received signal and the channel estimate;

B a channel tracker adapted to produce an updated channel estimate based on the received signal and the decided symbols and to supply the updated channel estimate to the equalizer;

a controller operatively coupled to the equalizer and the channel tracker;

wherein the controller is adapted to receive channel quality indicative data associated with an output from the equalizer, to determine whether the channel quality indicative data fail to meet a predetermined criterion, and, if so, to supply an enabling control signal to the channel tracker; and

wherein the enabling control signal is adapted to switch the channel tracker from a disabled state, in which disabled state ~~no updated channel estimate is produced~~ no channel tracker within the digital communication receiver is enabled, to an enabled state, in which enabled state the updated channel estimate is produced.

2. (previously presented) The digital communication receiver as in claim 1, wherein the channel quality indicative data are produced by the equalizer and represent a degree of correspondence between the received signal and the decided symbols.

3. (previously presented) The digital communication receiver as in claim 2, wherein the channel quality indicative data are computed by the equalizer as a squared distance between symbols in the received signal and symbols in a predicted received signal given the decided symbols.

4. (previously presented) The digital communication receiver as in claim 1, wherein the predetermined criterion is stored as a threshold value in an electronic memory operatively coupled to the controller.

5. (currently amended) The digital communication receiver as in claim 1, further comprising:

a second channel ~~tracker~~ estimator, which is operatively coupled to the equalizer and the controller;

wherein the channel quality indicative data are produced by the second channel ~~tracker~~ estimator in the form of additional channel estimates based on the decided symbols from the equalizer; and

wherein

the controller is adapted to compare the additional channel estimates with an initial channel estimate and to produce the enabling control signal if the comparison indicates a difference bigger than the predetermined criterion.

6. (previously presented) The digital communication receiver as in claim 1, wherein the receiver is capable of Time Division Multiple Access communication.

7. (previously presented) A digital communication receiver adapted to communicate with a digital communication transmitter across a communication channel, the digital communication receiver comprising:

a channel estimator adapted to provide a channel estimate of the communication channel based on a received signal;

an equalizer adapted to estimate a sequence of transmitted symbols and provide a sequence of decided symbols based on the received signal and the channel estimate;

a channel tracker adapted to produce an updated channel estimate based on the received signal and the decided symbols, and adapted to supply the updated channel estimate to the equalizer;

a controller operatively coupled to the channel tracker;

wherein the controller is adapted to compare the updated channel estimate with an initial channel estimate and to supply a disabling control signal to the channel tracker, if the comparison indicates a difference smaller than a predetermined criterion; and

wherein the disabling control signal is adapted to switch the channel tracker from an enabled state, in which enabled state the updated channel estimate is produced, to a disabled state, in which disabled state no updated channel estimate is produced.

8. (previously presented) The digital communication receiver as in claim 7, the receiver being capable of Time Division Multiple Access (TDMA) communication, wherein the updated channel estimate relates to the beginning and/or the end of a TDMA burst.

9. (previously presented) The wireless communication device of claim 7, wherein the device comprises a digital communication receiver.

*Pl Cont*

10. (previously presented) The wireless communication device as in claim 9, wherein the device comprises a radio telephone.

11. (previously presented) The wireless communication device as in claim 9, wherein the device comprises a base station in a cellular communication system.

12. (currently amended) A method of operating a digital communication receiver, wherein a channel estimate of a communication channel between the receiver and a digital communication transmitter is produced from a received signal and a sequence of decided symbols is produced from the received signal and the channel estimate, the method comprising:

a) receiving channel quality indicative data, the channel quality indicative data being directly or indirectly associated with the sequence of decided symbols;

b) determining whether the channel quality indicative data fail to meet a predetermined criterion; and

*B1 Cont.*  
c) conditionally, if the predetermined criterion is not met, switching a channel tracker from a disabled state, in which disabled state ~~no updated channel estimate is produced~~ no channel tracker within the digital communication receiver is enabled, to an enabled state, in which enabled state an updated channel estimate is produced from the received signal and the sequence of decided symbols.

13. (previously presented) The method as in claim 12, further comprising:

a') producing the channel quality indicative data as a calculated squared distance between symbols in the received signal and symbols in a predicted received signal given the decided symbols.

14. (previously presented) The method as in claim 12, further comprising:

a") producing the channel quality indicative data as additional channel estimates based on the decided symbols; and

wherein the predetermined criterion is a degree of correspondence between the additional channel estimates and an initial channel estimate.

15. (currently amended) A method of operating a digital communication receiver, wherein a channel estimate of a communication channel between the receiver and a digital communication transmitter is produced from a received signal and a sequence of decided symbols is produced from the received signal and the channel estimate, the method comprising:

- By cont.*
- a) receiving an updated channel estimate based on the decided symbols;
  - b) comparing the updated channel estimate with an initial channel estimate; and
  - c) conditionally, if the comparison indicates a difference smaller than a predetermined criterion, switching a channel tracker from an enabled state, in which enabled state an updated channel estimate is produced from the received signal and the sequence of decided symbols, to a disabled state, in which disabled state ~~no updated channel estimate is produced~~ no channel tracker within the digital communication receiver is enabled.

16. (previously presented) The method as in claim 15, wherein:

the receiver is capable of Time Division Multiple Access (TDMA) communication; and

the updated channel estimate relates to the beginning and/or the end of a TDMA burst.